

ARTICLES, PRESENTATIONS, AND STUDENT SUPPORT

Journal Articles (peer reviewed)

- Clarkson, R.B., Odintsov, B.M., Ceroke, P.J., Ardenkjaer-Larsen, J.H., Fruianu, M., Belford, R.L., "Electron Paramagnetic Resonance and Dynamic Nuclear Polarization of Char Suspensions: Surface Science and Oximetry," *Phys. Med. Biol.* *43*:1907-1920 (1998).
- Dalal, N.S., Smirnov, A.I., Belford, R.L., "Quantification of Coal-Diesel Particulate Mixtures by W-Band (94-GHz) Electron Spin Resonance Spectroscopy," *Appl. Spectr.* *51*:1429-1431 (1997).
- Nilges, M.J., Smirnov, A.I., Clarkson, R.B., Belford, R.L., "Electron Paramagnetic Resonance W-Band Spectrometer with a Low Noise Amplifier," *Special Issue Appl. Magn. Reson.*, in press (1999).
- Odintsov, B.M., Belford, R.L., Ceroke, P.J., Odintsov, A.B., Clarkson, R.B., "Temperature Dependence of Solid-Liquid Scalar Interactions in Aqueous Char Suspensions by Nonstationary DNP at Low Magnetic Field," *Surf. Sci.* *393*:162-170 (1997).
- Odintsov, B., Belford, R.L., Ceroke, P., Clarkson, R.B., "Solid-Liquid Electron Density Transfer in Aqueous Char Suspensions by ¹H Pulsed Dynamic Nuclear Polarization at Low Magnetic Field," *J. Am. Chem. Soc.* *120*:1076-1077 (1998).
- Odintsov, B.M., Belford, R.L., Ceroke, P.J., Idiyatullin, Z.Sh., Kashaev, R.S., Kuriashkin, I.V., Rukhlov, V.S., Temnikov, A.N., Clarkson, R.B., "Molecular Diffusion and DNP Enhancement in Aqueous Char Suspensions," *J. Magn. Reson.* *135*:435-443 (1998).

Student Dissertations

- Schwartz, D.A., "Magnetic Resonance of Oxides and a Hardware/Software System for Pulsed EMR," Ph.D. Thesis, University of Illinois at Urbana/Champaign (1997).
- Leece, B.J., "A Virtual SR530 Lock-in Amplifier Created Using Lab VIEW," B.S. Thesis, University of Illinois (1999).

Conference Presentations and Abstracts

- Clarkson, R.B., "Exploring Multifrequency EPR: 250 MHz to 250 GHz," Spectroscopy Society of Pittsburgh September Meeting, Pittsburgh, PA, September 24, 1997.
- Clarkson, R.B., Odintsov, B.M., Ceroke, P., Belford, R.L., "Characterizing Water Interactions at the Surface of Carbon Char Microparticles - Surface Science and Oximetry," ACS Boston Meeting, August 23-27, 1998.

- Clarkson, R.B., Odintsov, B.M., Ceroke, P., Ardenkjaer-Larsen, H., "DNP-Enhanced Magnetic Resonance Imaging with Carbon Chars," 39th Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 3-7, 1997.
- Odintsov, B.M., Belford, R.L., Ceroke, P.J., Odintsov, A.B., Clarkson, R.B., "Low-Field DNP Studies of Solvent Molecules at the Carbon Char/Liquid Interface," 23rd Biennial Conference on Carbon, Penn. State Univ., State College, PA, July 13-18, 1997.
- Odintsov, B.M., Ceroke, P.J., Belford, R.L., Clarkson, R.B., "Solid-Liquid Scalar Interactions in Aqueous Chars Suspensions by Pulsed DNP at Low Magnetic Field," 39th Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 3-7, 1997.
- Odintsov, B.M., Ceroke, P.J., Belford, R.L., Clarkson, R.B., "NMR and Low-Field DNP of Solvent Molecules at the Surface of Carbon Char Microparticles: Molecular Dynamics and Surface Science," 29th AMPERE - 13th ISMAR International Conference on Magnetic Resonance & Related Phenomena, Berlin, Germany, August 2-7, 1998.
- Odintsov, B.M., Ceroke, P.J., Belford, R.L., Odintsov, A.B., Clarkson, R.B., "Molecular Motion and DNP Enhancement in Aqueous Chars Suspensions," 39th Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 3-7, 1997.
- Odintsov, B.M., Ceroke, P.J., Belford, R.L., Odintsov, A.B., Clarkson, R.B., "Solvent Effect in Aqueous Hardwood Chars Suspensions," 39th Rocky Mountain Conference on Analytical Chemistry, Denver, CO, August 3-7, 1997.
- Odintsov, B.M., Belford, R.L., Ceroke, P.J., Clarkson, R.B., "Solid-Liquid Electron Density Transfer: Pulsed DNP in Aqueous Suspensions of Chars," 213th ACS National Meeting & Exposition Program, San Francisco, CA, April 13-17, 1997.

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